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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,734	05/22/2007	Richard Martin	06-132-A1	5512

63572 7590 09/22/2010

MCDONNELL BOEHNEN HULBERT @ BERGHOFF LLP
300 SOUTH WACKER DRIVE
SUITE 3100
CHICAGO, IL 60606

EXAMINER	
JAISLE, CECILIA M	

ART UNIT	PAPER NUMBER
1624	

MAIL DATE	DELIVERY MODE
09/22/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,734	MARTIN ET AL.	
	Examiner	Art Unit	
	Cecilia M. Jaisle	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 July 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-11,13,14 and 31-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-11,13,14 and 31-40* is/are rejected.

7)☒ Claim(s) *1-6, 8-11,13,14 and 31-36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 May 2006* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED OFFICE ACTION

Rejections Under 35 USC 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6, 8-11, 13, 14 and 31-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, in the first line of the last paragraph on page 3, "theoptional" should read -- the optional --.

In claim 13, line 1, "theoptional" should read -- the optional --.

Rejections Under 35 USC 102

The following is a quotation of the appropriate paragraphs of 35 USC 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 11, 13, 14, 31, 33 and 40 are rejected under 35 USC 102(e) over Nunes, et al., WO 2005009443, entitled to the date of 20030624 (cited by Applicants), describing compositions of RN 1058628-44-6 for treatment of inflammatory diseases.

Response to 07-27-2010 Comments

Applicants assert that, in the present claims, R2 cannot be aryl or halo, so that Nunes does not anticipate the claims. Recall that R2 and R4 in the present compounds are equivalent and R4 can be aryl. This rejection is deemed sound and is maintained.

Claims 1, 11, 13, 14, 31 and 40 are rejected under 35 USC 102(b) over Chu-Moyer, et al., US 6414149, issued 20020702, describing compositions of RN 300550-97-4 as sorbitol dehydrogenase inhibitors.

Response to 07-27-2010 Comments

Applicants assert that, in the present claims, R2 cannot be a heterocycle or halo, so Chu-Moyer does not anticipate the claims. Recall that R2 and R4 in the present compounds are equivalent and R4 can be heterocycle. This rejection is deemed sound and is maintained.

Claims 1-6, 8-11, 13, 14 and 31-40 are rejected under 35 USC 102(b) over Davey, et al., US 6127376, issued 20001003, describing compositions of RN numbers 1100594-48-6, 1100594-50-0, 1100594-52-2, 1100594-53-3, 1100594-54-4, 1100594-55-5, 1100594-57-7, 1100594-60-2, 1100594-80-6, 274673-39-1, 274673-40-4, 274673-44-8, and 274673-45-9 as anticoagulants.

Response to 07-27-2010 Comments

Applicants are correct in pointing out certain Davey compounds that are not encompassed by the present claims. However, Davey still describes numerous compounds that do anticipate the present claims. See specifically compounds described in Ex. 1, cols. 24-25 and compositions described in Exs. 2-7, cols. 25-27.

Claims 1, 11, 13, 14, 31, 33 and 40 are rejected under 35 USC 102(b) over Murata, et al., JP 2001139560, published 20010522 (cited by Applicants), describing compositions of RN 340008-58-4 as autoimmune inflammatory disease remedies.

Response to 07-27-2010 Comments

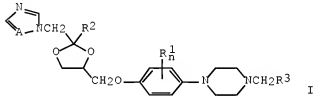
Applicants assert that, in the present claims, R2 cannot be aryl or halo, so that Murata does not anticipate the claims. Recall that R2 and R4 in the present compounds are equivalent and R4 can be aryl. This rejection is deemed sound and is maintained.

Claims 1, 11, 13, 14, 31 and 40 are rejected under 35 USC 102(a) over Ahmad, et al., US 6887870, entitled to the date 19991012, describing compositions of RN 335063-13-3 as heterocyclic sodium/proton exchange inhibitors.

Response to 07-27-2010 Comments

Applicants assert that, in the present claims, R2 cannot be a heterocycle or halogen, so that Ahmad does not anticipate the claims. Recall that R2 and R4 in the present compounds are equivalent and R4 can be heterocycle. This rejection is deemed sound and is maintained.

Claims 1-6, 8-11, 13, 14, 31-36 and 40 are rejected under 35 USC 102(b) over Kampe, et al., US 4859670, issued 19890822.



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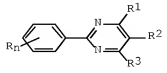
Compositions of formula I [R1=C1-3 alkyl, F, Cl; R2 = naphthyl, thienyl, halothienyl, (substituted) Ph; Y=(substituted) phenylpyrimidinyl, phenylpyridyl, quinolyl, isoquinolyl; A=CH, N; n=0-2] were prepared as medicinal fungicides. See especially compositions of RN numbers 111921-72-3, 111921-21-2, 111921-25-6, 111921-26-7, 111921-44-9, 111921-48-3, 111920-67-3, 111920-68-4, 111920-69-5, 111920-75-3, 111920-90-2, 111920-95-7 and 111943-51-2.

Response to 07-27-2010 Comments

Applicants are correct in asserting that the majority of compositions of Kampe do not fall within the scope of the claims. However, Kampe still describes numerous compounds that do anticipate the present claims. See the compounds enumerated above.

Claims 1-6, 8-11, 13, 14, 31-36 and 40 are rejected under 35 USC 102(b) over Seiler, et al., EP 136976, published 19850410.



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The phenylpyrimidines I (R = H, halo, NO2, CN, OH, alkyl, etc.; R1 and R2 = H, halo, alkyl, alkoxyalkyl, etc.; R3 = H, halo, alkyl, haloalkyl, or Ph) are plant growth regulators. See especially compositions of RN number 77232-23-6.

Response to 07-27-2010 Comments

Applicants fail to make any comments on this rejection, which is deemed proper.

The following are new grounds of rejection.

Claims 1, 11, 13, 31 and 40 are rejected under 35 USC 102(b) over Fujikawa, et al., US 5026708, issued 19910625, describing RN 122930-78-3, RN 122930-80-7, RN 122930-81-8, RN 122930-82-9, RN 122930-83-0, RN 122930-84-1 as antihyperlipemic agents.

Claims 1, 11, 13, 31 and 40 are rejected under 35 USC 102(b) over Howe, et al., J. Med. Chem. (1972), 15(10), 1040-5, describing compositions of RN 19899-98-0, as an anti-inflammatory.

Rejections Under 35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of claims under 35 U.S.C. 103(a), the examiner presumes the subject matter of the various claims was commonly owned when any inventions covered therein were made absent any contrary evidence. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider applicability of 35 USC 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 USC 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 8-11, 13, 14 and 31-39 are rejected under 35 USC 103(a) over Davey, et al., US 6127376, issued 20001003, describing compositions of RN numbers 1100594-48-6, 1100594-50-0, 1100594-52-2, 1100594-53-3, 1100594-54-4, 1100594-55-5, 1100594-57-7, 1100594-60-2, 1100594-80-6, 274673-39-1, 274673-40-4, 274673-44-8, and 274673-45-9 as anticoagulants. The claimed compounds are alkyl homologs and/or position isomers of the Davey compounds and obvious to the skilled chemist for the same utility. The claimed compounds are alkyl homologs and/or position

isomers of the Bebbington compounds and obvious to the skilled chemist for the same utility. The claimed compounds are alkyl homologs and/or position isomers of the Bebbington compounds and obvious to the skilled chemist for the same utility.

It would have been obvious to one of ordinary skill in the art when the present invention was made to modify the Bebbington compounds to prepare alkyl homologs and position isomers thereof. One having ordinary skill in the art would have been motivated to prepare the instantly claimed compounds because such structurally homologous and position isomeric compounds are expected to possess similar properties. It has been held that compounds that are structurally homologous and position isomeric to prior art compounds are *prima facie* obvious, absent a showing of unexpected results.

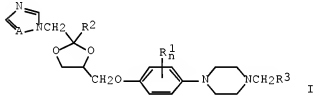
> An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties.

In re Payne, 203 USPQ 245, 254 (CCPA 1979). See also *In re Papesch*, 137 USPQ 43 (CCPA 1963) and *In re Dillon*, 16 USPQ2d 1897 (Fed. Cir. 1991) (discussed in MPEP § 2144) for an extensive case law review pertaining to obviousness based on close structural chemical compound similarity. See also MPEP § 2144.08, ¶ II.A.4(c). Compounds that are homologs (compounds differing regularly by successive addition of the same chemical group, e.g., by CH3- groups) and position isomers (compounds differing by an adjacent or near adjacent functional group), as here, are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. *In re Wilder*, 195 USPQ 426 (CCPA 1977).

Response to 07-27-2010 Comments

Applicants assert the claimed compounds are not alkyl homologs and/or position isomers of Davey compounds. However, see compounds described in Ex. 1, cols. 24-25 and compositions described in Exs. 2-7, cols. 25-27. See the discussion above of the obviousness of alkyl homologs and/or position isomers of the Davey compounds.

Claims 1-6, 8-11, 13, 14 and 31-36 are rejected under 35 USC 103(a) over Kampe, et al., US 4859670, issued 19890822.



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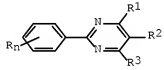
Formula I compositions [R1=C1-3 alkyl, F, Cl; R2=naphthyl, thienyl, halothienyl, (substituted) Ph; Y=(substituted) phenylpyrimidinyl, phenylpyridyl, quinolyl, isoquinolyl; A=CH, N; n=0-2] are medicinal fungicides. See especially the compositions of RN 111921-72-3, 111921-21-2, 111921-25-6, 111921-26-7, 111921-44-9, 111921-48-3, 111920-67-3, 111920-68-4, 111920-69-5, 111920-75-3, 111920-90-2, 111920-95-7, and 111943-51-2. The claimed compounds are alkyl homologs and/or position isomers of Kampe compounds and obvious to the skilled chemist for the same utility. See the discussion above about the obviousness of alkyl homologs and/or position isomers.

Response to 07-27-2010 Comments

Applicants are correct in asserting that the majority of compositions of Kampe do not render obvious compounds that fall within the scope of the claims. However, Kampe still describes numerous compounds that do render obvious the present claims. See the compounds enumerated above.

Claims 1-6, 8-11, 13, 14 and 31-36 are rejected under 35 USC 102(b) over Seiler, et al., EP 136976, published 19850410.



I

The phenylpyrimidines I (R = H, halo, NO2, CN, OH, alkyl, etc.; R1 and R2 = H, halo, alkyl, alkoxyalkyl, etc.; R3 = H, halo, alkyl, haloalkyl, or Ph) are plant growth regulators. See especially compositions of RN numbers 77232-23-6, 79382-50-6.

Response to 07-27-2010 Comments

Applicants fail to make any comments on this rejection, which is deemed proper.

The following are new grounds of rejection.

Claims 1, 11, 13, 14, 31 and 33 are rejected under 35 USC 103(a) as obvious over Murata, et al., JP 2001139560, published 05-2001 (cited by Applicants), describing RN 340149-55-5, RN 340149-57-7, RN 340149-59-9, RN 340149-83-9, RN 340149-85-1, and RN 340149-87-3 compositions to treat autoimmune inflammatory disease. The

claimed compounds are ring position isomers of Murata compounds and obvious to the skilled chemist for the same utility.

It would have been obvious to one of ordinary skill in the art when the present invention was made to modify Murata compounds to prepare ring position isomers thereof. One having ordinary skill in the art would have been motivated to prepare the instantly claimed compounds because ring position isomeric compounds are expected to have similar properties. It has been held that compounds that are ring position isomeric to prior art compounds are *prima facie* obvious, absent unexpected results.

> An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties.

In re Payne, 203 USPQ 245, 254 (CCPA 1979). See also *In re Papesch*, 137 USPQ 43 (CCPA 1963) and *In re Dillon*, 16 USPQ2d 1897 (Fed. Cir. 1991) (discussed in MPEP § 2144) for an extensive case law review pertaining to obviousness based on close structural chemical compound similarity. See also MPEP § 2144.08, ¶ II.A.4(c). Compounds that are ring position isomers (compounds differing by an adjacent or near adjacent functional group), as here, are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. *In re Wilder*, 195 USPQ 426 (CCPA 1977).

Claims 1, 11, 13, 31 and 40 are rejected under 35 USC 103(a) over Fujikawa, et al., US 5026708, issued 19910625, describing RN 122930-78-3, RN 122930-80-7, RN 122930-81-8, RN 122930-82-9, RN 122930-83-0, RN 122930-84-1 as antihyperlipemic

agents. The claimed compounds are ring position isomers and/or alkyl homologs of Fujikawa compounds and obvious to the skilled chemist for the same utility. See the discussion above of the obviousness of ring position isomers and/or alkyl homologs.

Claims 1, 11, 13, 31 and 40 are rejected under 35 USC 103(a) over Howe, et al., J. Med. Chem. (1972), 15(10), 1040-5, describing RN 19899-98-0 compositions, as an anti-inflammatory. The claimed compounds are ring position isomers and/or alkyl homologs of Howe compounds and obvious to the skilled chemist for the same utility. See the discussion above of the obviousness of ring position isomers and/or alkyl homologs.

Claims 1-6, 8, 10, 11, 13, 31 and 40 are rejected under 35 USC 103(a) over Santilli, et al., US 3498984, issued 3-3-1970, describing 4-heteraryl-2-phenyl-6-thiopyrimidines (col. 1, l. 21-50) with, *inter alia*, antiviral activity. See 4-(4-ethyl-1-piperazinyl)-2-phenyl-6-phenyl-thipyrimidine compounds of Ex. VIII, 4-(4-chloro-2-phenylpyrimidin-6-yl)-1-piperazine ethanol of Ex. X, 4-(4-chlorophenylthio)-6-(hexahydroaz-epin-1-yl)-2-phenyl-pyrimidine, *inter alia*. Claimed compounds are ring position isomers and/or alkyl homologs of Santilli compounds and obvious to the skilled chemist for that utility. See discussion above of obviousness of ring position isomers and/or alkyl homologs.

Objectionable Claims

Claims 1-6, 8-11, 13, 14 and 31-36 are objectionable as directed to elected and non-elected subject matter. They should be amended to recite only elected subject

matter, as set forth above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cecilia M. Jaisle whose telephone number is 571-272-9931. The examiner can normally be reached on Monday through Friday; 8:30 am through 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. If you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cecilia M. Jaisle/
Examiner, Art Unit 1624

/James O. Wilson/
Supervisory patent Examiner, AU 1624